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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,043	09/26/2003	Daniel White Sexton	125836	1099

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GENERAL ELECTRIC COMPANY (PCPI)  
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EXAMINER
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SINKANTARAKORN, PAWARIS

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/672,043	<b>Applicant(s)</b> SEXTON ET AL.	
	<b>Examiner</b> Pao Sinkantarakorn	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matteson et al. (US 7,164,684) in view of Palmer et al. (US 6,141,355).

**Regarding claim 1**, Matteson et al. disclose a network communication device for bi-directional communication networks, comprising:

a first portion connectable to a first point and a second point on the bi-directional communication network (see column 6 lines 9-31, a switch is connected to a CPU and a network), the first portion being configured to manage collisions among a first set of messages transmittable from the first point to the second point (see column 2 lines 54-57, switches are used to reduce collisions in a network); and

a second portion connectable to the first point and the second point (see column 6 lines 9-31, a router or a hub is connected to a CPU and a network), the second portion being configured to transmit a second set of messages transmittable from the second point to the first point (see column 2 lines 27-35, communication devices are capable of transmitting and receiving communication transmissions between communication devices and a plurality of network connectivity devices).

Matteson et al. do not disclose a network communication device, wherein the second portion being configured to transmit free of collision management a second set of messages. However, the invention of Palmer et al. from the same or similar fields of endeavor disclose an enhanced network comprising an X-hub 4 allowing concurrent transmissions through several network interface points without resulting collisions (see column 9 lines 33-38).

Thus, it would have been obvious to the person of ordinary skill in the art to implement an X-hub 4 allowing concurrent transmissions through several network

interface points without resulting collisions into the network communication device of Matteson et al.

The motivation for implementing an X-hub 4 allowing concurrent transmissions through several network interface points without resulting collisions is that it provides a more efficient network communication device.

**Regarding claim 2**, the first and second messages are selected from the group consisting of electrical messages, optical messages, acoustic messages, and any combinations thereof (see column 2 lines 36-39, coaxial cable, or fiber optic cable);

**regarding claim 3**, the first portion is a network switch (see column 6 lines 9-31, switch module);

**regarding claim 4**, the network switch is an analog switch or a digital switch (see column 1 lines 6-7, computer network is considered digital network);

**regarding claim 5**, the second portion is a network hub (see column 6 lines 9-31, hub or router module);

**regarding claim 6**, the network hub is an analog hub or a digital hub (see column 1 lines 6-7, computer network is considered digital network);

**regarding claim 7**, the first and second portions are separate devices or a single device (see Figure 5 reference numerals 158, 162, 166, and 172);

**regarding claim 8**, further comprising a plurality of network connections for connecting the first and second portions to the first and second points (see column 6 lines 9-31, a CPU is connected to a network through a hub, a switch, a repeater, and a router);

Art Unit: 2616

**regarding claim 9**, the plurality of network connections are standardized Ethernet cable connections (see column 1 line 21, Ethernet network).

**Regarding claim 10**, Matteson et al. disclose a bi-directional communication device comprising:

- a hub portion (see column 6 lines 9-31, hub or router module);

- a switch portion (see column 6 lines 9-31, switch module);

- a first plurality of connections for connecting the hub portion to a plurality of first points (see column 9-31, a hub or a router module is connected to a network, which comprises plurality of nodes) on a bi-directional communication network and to a second point on the bi-directional communication network (see column 6 lines 9-31, a CPU is connected to a hub, a switch, a repeater, and a router); and

- a second plurality of connections for connecting the switch portion to the plurality of first points and to the second point (see column 6 lines 9-31, a CPU is connected to a network, which comprises plurality of nodes, through a hub, a switch, a repeater, and a router);

**regarding claim 11**, the hub portion is configured to transmit first messages from the second point to the plurality of first points (see column 2 lines 27-35, a hub or a router module is capable of transmitting and receiving communication transmissions between CPU and a network, which comprises a plurality of nodes);

**regarding claim 12**, Matteson et al. disclose all the subject matter of the claimed invention previously discussed except a bi-directional communication device, wherein

the hub portion is configured to transmit the first messages without collision management.

However, the invention of Palmer et al. from the same or similar fields of endeavor disclose an enhanced network comprising an X-hub 4 allowing concurrent transmissions through several network interface points without resulting collisions (see column 9 lines 33-38, since an X-hub 4 provides a collision-free transmission, collision management is not needed).

Thus, it would have been obvious to the person of ordinary skill in the art to implement an X-hub 4 allowing concurrent transmissions through several network interface points without resulting collisions into the network communication device of Matteson et al.

The motivation for implementing an X-hub 4 allowing concurrent transmissions through several network interface points without resulting collisions is that it provides a more efficient network communication device.

**regarding claim 13**, the switch portion is configured to transmit second messages from the plurality of first points to the second point (see column 2 lines 27-35, a switch module is capable of transmitting and receiving communication transmissions between CPU and a network, which comprises a plurality of nodes);

**regarding claim 14**, the switch portion is configured to manage collisions among the second messages (see column 2 lines 54-57, switches are used to reduce collisions in a network);

**regarding claim 15**, the network switch and the network hub are analog devices, digital devices, or any combination thereof (see column 1 lines 6-7, computer network is considered digital network);

**regarding claim 16**, the hub and switch portions are separate devices or a single device (see Figure 5 reference numerals 158, 162, 166, and 172);

**regarding claim 17**, the first and second plurality of connections are standardized Ethernet cable connections (see column 1 line 21, Ethernet network).

**regarding claim 18**, Matteson et al. disclose a method of communicating messages on a bi-directional communication network, comprising:

transmitting a first message (see column 2 lines 27-35, a switch module is capable of transmitting and receiving communication transmissions) from each of a plurality of first points (see column 6 lines 9-31, connectivity device is connected to a network, which comprises of plurality of nodes) on the bi-directional communication network to a single second point (see column 6 lines 9-31, CPU) on the bi-directional communication network through a switch portion of a communication device; and

transmitting a second message (see column 2 lines 27-35, a hub or a router module is capable of transmitting and receiving communication transmissions) from the single second point (see column 6 lines 9-31, CPU) to the plurality of first points (see column 6 lines 9-31, connectivity device is connected to a network, which comprises a plurality of nodes) through a hub portion of the communication device;

Art Unit: 2616

**regarding claim 19**, the switch and hub portions are analog devices, digital devices, or any combinations thereof (see column 1 lines 6-7, computer network is considered digital network);

**regarding claim 20**, the switch and hub portions are separate devices or a unitary device (see Figure 5 reference numerals 158, 162, 166, and 172).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mora (US 2003/0014535) and Souissi (US 2002/0075891) are cited to show system/method considered pertinent to the claimed invention.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS

A handwritten signature in black ink, appearing to be "Pa Sh".A handwritten signature in black ink, appearing to be "Ricky Q. Ngo".

RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER